REMARKS/ARGUMENTS

Claims 1-30, 32-37, 39, 41, 43, and 45-55 were examined on the merits. Claims 1, 13, 29, and 34 are the only independent claims. This amendment does not cancel any claims, and does not add any new claims. No new matter is introduced.

Examiner's Response to Arguments

The applicant has reviewed the Office's response to arguments, starting from page 2 of the Office Action. The applicant respectfully disagrees, and maintains all previous positions with respect to those issues previously discussed and argued.

Specifically, on page 3 of the Office Action, the Office stated that the "claim recites a generic processor" (line 3) and a "generic memory" (line 10), thus a broad interpretation of certain claimed elements were taken by the Office. The applicant respectfully disagrees.

Patent Examiners Should Interpret Claims in Light of Specification

The court has recently indicated that the PTO should apply the principles of *Phillips v. AWH* during prosecution — rather than the PTO's current practice of giving claims their "broadest reasonable interpretation." *In re Johnston* (Fed. Cir. 2006). The Patent Office may use a dictionary in defining the patent applicant's claim terms only when the patent specification did not otherwise provide any interpretation.

Although claims are hereby amended, the applicant respectfully submits that the amendments to the claims traverse the Examiner's previous interpretation of certain claim elements.

35 USC 103(a) Rejection

Claims 1-10, 12-25, 27-30, 32-37 and 46-55 were rejected under 35 U.S.C. § 103(a) as being obvious over Frederick et al. (U.S. Patent No. 6,314,479) in view of Roskowski et al.(U.S. Patent No. 5,257,348), and further in view of Ersoz et al. (US 5,287,189) and Iwaki (US 6,567,097). The applicant respectfully disagrees.

Claims 11 and 26 were rejected under 35 U.S.C. § 103(a) as being obvious over Frederick et al. (U.S. Patent No. 6,314,479) in view of Roskowski et al.(U.S. Patent No. 5,257,348), and further in view of Ersoz et al. (US 5,287,189) and Iwaki (US 6,567,097), and Newman (US 6,154,600). The applicant respectfully disagrees.

Claims 39, 41, 43, and 45 were rejected under 35 U.S.C. § 103(a) as being obvious over Frederick et al. (U.S. Patent No. 6,314,479) in view of Roskowski et al.(U.S. Patent No. 5,257,348), and further in view of Ersoz et al. (US 5,287,189) and Iwaki (US 6,567,097), and Gough et al. (US 6,072,489). The applicant respectfully disagrees.

The applicant respectfully disagrees for the reasons discussed below. The applicant also hereby makes amendments to the claims in view of the Examiner's comments. Applicant respectfully submits that the amendments to the claims traverse this rejection.

The 35 U.S.C. §103(a) states the following:

> "(a) A patent may not be obtained though the invention is not identically disclosed or described as set for the in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be nagatived by the manner in which the invention was made."

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The Office Action specifically discussed claim 13 only, and not other independent claims. Here, the applicant replies starting with discussion of claim 1.

Without conceding the propriety of the asserted combination, however, Applicant respectfully submits that the asserted combination does not disclose at least the aforementioned feature of claim 1, for at least the following reasons.

The Cited References, Combined or Individually, Do Not Disclose Every Limitation

The amended claim 1 recites the following limitations:

> "A display apparatus for use with a host computer system, the display apparatus comprising circuitry allowing an interlaced mode of operation and a noninterlaced mode of operation, the display apparatus comprising:
>
> means for receiving a user input to switch a mode of operation from the interlaced mode of operation to the noninterlaced mode of operation;
>
> a screen, said screen operable to display noninterlaced signals including visually detectable output from the host computer system when operating in the noninterlaced mode of operation and operable to display a television compatible signal when operating in the interlaced mode of operation;
>
> a communication channel between said host computer system and said display apparatus, the communication channel for transmitting commands and information to and from said host computer system and said display apparatus;
>
> a microprocessor for receiving and processing commands from said host computer system, said microprocessor comprising control logic for switching said display apparatus between said interlaced and noninterlaced modes of operation in response to said commands; and
>
> a connector coupled to video capture circuitry configured, in response to receiving said user input, for use in the noninterlaced mode to convert the television compatible signal into a noninterlaced television output to be displayed in an overlay window while said visually detectable output from the host computer system is being displayed."

The cited references do not disclose a video capture circuitry where, **in response to receiving said user input switching to the noninterlaced mode, to convert the television compatible signal into a noninterlaced output.** The Office admitted that Frederick does not perform conversions, but does disclose PIP functionality. The Office introduced Roskowski and argued that Roskowski teaches having converters to convert between interlaced video data into noninterlaced video data, and vice versa. While it is generally true that Roskowski teaches such converter, there is no teaching for such conversion to take place "**in response to receiving a user input switching to the noninterlaced mode.**"

Frederick discloses an interface between a PC and a display (col. 4, lines 28-31), allowing interconnectivity between PC Theatre computers and display products that are made by different manufacturers. In Frederick's examples, a display 12 (col 19, lines 14-32) having the functions of a stand-alone TV and can support noninterlaced data is used. Frederick discloses two modes, a stand-alone TV mode, and a slave mode where the display is driven by the PC (col. 19, lines 25-32). Procedures to switch between the two modes are described in col. 21, line 15 –

col. 22, line 22. In slave mode, the PC drives video input from the of the display (col. 21, lines 38-39). Frederick is silent as to converting an interlaced data to a noninterlaced data so it can be played in a slave mode. Frederick is also silent as to whether switching from stand-alone mode to slave mode causes any kind of video content processing/conversion.

As discussed above, Roskowski teaches a converter. Converting the TV signal in Browne, however, would have destroyed the Browne device.

The Browne Device would have been Destroyed in Such Combination

According to MPEP 2141.02 and 2143.01, prior art must be considered in its entirety, including disclosures that teach away from the claims, and that proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Browne is directed to an interface device where a stand-alone TV mode and a slave mode can be independent used without conversion of signal upon the change of mode, the combination as suggested by the Office would result in undesirable transition between stand-alone TV mode and slave mode.

As for Ersoz, Ersoz merely teaches displaying an interlaced video signal with a noninterlaced video signal. There is no mentioning of conversion taking place **in response to receiving a user input switching to the noninterlaced mode.**

In addition, the cited references do not disclose **a microprocessor inside of a display apparatus, and for such microprocessor to receive and process commands from the host computer system to switch between two modes of operation.** The Office introduced Iwaki as teaching for having such microprocessor. The applicant respectfully disagrees.

Iwaki fails to teach or suggest a microprocessor in the display apparatus to receive, and also to process, commands from the host computer to switch modes. Review the portion of the Iwaki reference as referred to in the Office Action (col. 4, lines 26-38) reveals that MUX 106 does not perform the switching function, it merely combines signals. MUX 106 combines two signals so that both are appear on the same screen in the same format. Although the word

"select" is used on col. 4, line 26, it is not meant to describe a selection process. Iwaki is silent elsewhere about any type of selection/switching process. The applicant believes the word "receives" may more appropriately describe what takes place in col. 4, line 26.

Accordingly, favorable reconsideration and withdrawal of the rejection of independent claim 13 under 35 U.S.C. § 103 is respectfully requested.

Accordingly, the currently amended claim 13 is patentable over the cited references. Thus, dependent claims 2-12, 39, 46, and 47 depending thereupon are also patentable.

Rejections to Claim 4

Claim 4 now requires wherein changing a channel is performed by the microprocessor and not the host computer system. While some of the prior art may disclose a display apparatus having a general processor disposed within to merely receive instruction, none of the cited prior art discloses a display apparatus having a microprocessor disposed within to not only receive, but also process instruction.

Accordingly, for at least the aforementioned reasons, reconsideration and withdrawal of the rejections of claim 4 under 35 U.S.C. § 103 is respectfully requested.

Rejection to Independent Claim 13

The following argument is similar to the above discussion regarding claim 1, some portions are repeated.

The amended claim 13 recites the following limitations:

> "A computer system comprising:
> a host computer system including:
> a processor;
> a memory coupled to said processor;
> a video controller coupled to said processor and said memory;

means for receiving a user input to switch a mode of operation from an interlaced mode of operation to a noninterlaced mode of operation;

video capture circuitry configured, in response to receiving said user input switching to the noninterlaced mode, to covert the television compatible signal into a noninterlaced television output to be displayed in an overlay window while said visually detectable output from the host computer system is being displayed; and

a display apparatus coupled to [[a]]the video controller of the host computer system, the display apparatus comprising circuitry allowing the interlaced mode of operation and the noninterlaced mode of operation, the display apparatus comprising:

a screen, said screen operable to display noninterlaced signals including visually detectable output from the host computer system when operating in the noninterlaced mode of operation and operable to display a television compatible signal when operating in the interlaced mode of operation;

a communication channel between said host computer system and said display apparatus,

the communication channel for transmitting commands and information to and from said host computer system and said display apparatus;

a microprocessor for receiving and processing commands from said host computer system, said microprocessor comprising control logic for switching said display apparatus between said interlaced and noninterlaced modes of operation in response to said commands; and

a connector coupled to the video controller."

The cited references do not disclose a video capture circuitry where, **in response to receiving said user input switching to the noninterlaced mode, to convert the television compatible signal into a noninterlaced output.** The Office admitted that Frederick does not perform conversions, but does disclose PIP functionality. The Office introduced Roskowski and argued that Roskowski teaches having converters to convert between interlaced video data into noninterlaced video data, and vice versa. While it is generally true that Roskowski teaches such converter, there is no teaching for such conversion to take place "**in response to receiving a user input switching to the noninterlaced mode.**"

Frederick discloses an interface between a PC and a display (col. 4, lines 28-31), allowing interconnectivity between PC Theatre computers and display products that are made by different manufacturers. In Frederick's examples, a display 12 (col 19, lines 14-32) having the functions of a stand-alone TV and can support noninterlaced data is used. Frederick discloses two modes, a stand-alone TV mode, and a slave mode where the display is driven by the PC (col.

19, lines 25-32). Procedures to switch between the two modes are described in col. 21, line 15 – col. 22, line 22. In slave mode, the PC drives video input from the of the display (col. 21, lines 38-39). Frederick is silent as to converting an interlaced data to a noninterlaced data so it can be played in a slave mode. Frederick is also silent as to whether switching from stand-alone mode to slave mode causes any kind of video content processing/conversion.

As discussed above, Roskowski teaches a converter. Converting the TV signal in Browne, however, would have destroyed the Browne device.

The Browne Device would have been Destroyed in Such Combination

According to MPEP 2141.02 and 2143.01, prior art must be considered in its entirety, including disclosures that teach away from the claims, and that proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Browne is directed to an interface device where a stand-alone TV mode and a slave mode can be independent used without conversion of signal upon the change of mode, the combination as suggested by the Office would result in undesirable transition between stand-alone TV mode and slave mode.

As for Ersoz, Ersoz merely teaches displaying an interlaced video signal with a noninterlaced video signal. There is no mentioning of conversion taking place **in response to receiving a user input switching to the noninterlaced mode.**

In addition, the cited references do not disclose **a microprocessor inside of a display apparatus, and for such microprocessor to receive and process commands from the host computer system to switch between two modes of operation.** The Office introduced Iwaki as teaching for having such microprocessor. The applicant respectfully disagrees.

Iwaki fails to teach or suggest the a microprocessor in the display apparatus to receive, and also to process, commands from the host computer to switch modes. Review the portion of the Iwaki reference as referred to in the Office Action (col. 4, lines 26-38) reveals that MUX 106 does not perform the switching function, it merely combines signals. MUX 106 combines two

signals so that both are appear on the same screen in the same format. Although the word "select" is used on col. 4, line 26, it is not meant to describe a selection process. Iwaki is silent elsewhere about any type of selection/switching process. The applicant believes the word "receives" may more appropriately describe what takes place in col. 4, line 26.

Accordingly, favorable reconsideration and withdrawal of the rejection of independent claim 13 under 35 U.S.C. § 103 is respectfully requested.

Accordingly, the currently amended claim 13 is patentable over the cited references. Thus, dependent claims 14-28, 41, 48, and 49 depending thereupon are also patentable.

Rejections to Claim 15

Claim 15 now requires wherein changing a channel is performed by the microprocessor and not the host computer system. While some of the prior art may disclose a display apparatus having a general processor disposed within to merely receive instruction, none of the cited prior art discloses a display apparatus having a microprocessor disposed within to not only receive, but also process instruction.Accordingly, for at least the aforementioned reasons, reconsideration and withdrawal of the rejections of claim 15 under 35 U.S.C. § 103 is respectfully requested.

Rejection to Independent Claim 29

The following argument is similar to the above discussion regarding claim 1, some portions are repeated.

The amended claim 29 recites the following limitations:

> "A method of operating a computer system to control a display apparatus, the display apparatus coupled to a video controller of the computer system, said computer system and said display apparatus further coupled via a communication channel, the display apparatus comprising circuitry providing a first mode of operation which is an interlaced mode of operation and a second mode of

operation which is a noninterlaced mode of operation, said method comprising the steps of:

operating the display in said first ~~display~~ mode;

receiving user input to change the ~~display~~ mode of operation from said first mode of operation to said second mode of operation;

sending a mode change command to the display apparatus in response to said user input;

in response to the mode change command, converting a television compatible interlaced signal into a converted television signal which is a noninterlaced signal;

transitioning the display apparatus from said first mode of operation to said second mode of operation; and

controlling , by a microprocessor disposed inside of the display apparatus, at least one television function of the display apparatus from the host computer system by a command received from said host computer system when said display device is in said noninterlaced mode of operation and enabling an overlay window displaying the converted television signal,

wherein the television function includes at least one of changing channel, volume adjustment, picture adjustment, selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution and color temperatures."

The cited references do not disclose a method, where, **in response to receiving a command to change mode of operation, to convert the television compatible signal into a noninterlaced output.** The Office admitted that Frederick does not perform conversions, but does disclose PIP functionality. The Office introduced Roskowski and argued that Roskowski teaches having converters to convert between interlaced video data into noninterlaced video data, and vice versa. While it is generally true that Roskowski teaches such converter, there is no teaching for such conversion to take place "**in response to receiving a mode change command.**"

Frederick discloses an interface between a PC and a display (col. 4, lines 28-31), allowing interconnectivity between PC Theatre computers and display products that are made by different manufacturers. In Frederick's examples, a display 12 (col 19, lines 14-32) having the functions of a stand-alone TV and can support noninterlaced data is used. Frederick discloses two modes, a stand-alone TV mode, and a slave mode where the display is driven by the PC (col. 19, lines 25-32). Procedures to switch between the two modes are described in col. 21, line 15 – col. 22, line 22. In slave mode, the PC drives video input from the of the display (col. 21, lines

38-39). Frederick is silent as to converting an interlaced data to a noninterlaced data so it can be played in a slave mode. Frederick is also silent as to whether switching from stand-alone mode to slave mode causes any kind of video content processing/conversion.

As discussed above, Roskowski teaches a converter. Converting the TV signal in Browne, however, would have destroyed the Browne device.

The Browne Device would have been Destroyed in Such Combination

According to MPEP 2141.02 and 2143.01, prior art must be considered in its entirety, including disclosures that teach away from the claims, and that proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Browne is directed to an interface device where a stand-alone TV mode and a slave mode can be independent used without conversion of signal upon the change of mode, the combination as suggested by the Office would result in undesirable transition between stand-alone TV mode and slave mode.

As for Ersoz, Ersoz merely teaches displaying an interlaced video signal with a noninterlaced video signal. There is no mentioning of conversion taking place **in response to receiving a user input switching to the noninterlaced mode.**

In addition, the cited references do not disclose a method of using **a microprocessor disposed inside of a display apparatus to control television function.** While some of the prior art may disclose a display apparatus having a general processor disposed within to merely receive instruction, none of the cited prior art discloses a display apparatus having a microprocessor disposed within to not only receive, but also process instruction.

Accordingly, favorable reconsideration and withdrawal of the rejection of independent claim 29 under 35 U.S.C. § 103 is respectfully requested.

Accordingly, the currently amended claim 13 is patentable over the cited references. Thus, dependent claims 30, 32, 33, 43 and 54 depending thereupon are also patentable.

Rejection to Independent Claim 34

The following argument is similar to the above discussion regarding claim 1, some portions are repeated.

The amended claim 34 recites the following limitations:

> "A computer system comprising:
> a host computer system including:
> a processor;
> a memory coupled to said processor;
> a video controller coupled to said processor and said memory;
> means for receiving a user input to switch a mode of operation from the interlaced mode of operation to the noninterlaced mode of operation;
> video capture circuitry configured for use in the noninterlaced mode to convert, in response to receiving said user input, an interlaced television compatible signal into a noninterlaced converted television output; and
> a display apparatus coupled to a video controller of the host computer system, the display apparatus comprising:
> a screen, said screen operable to display visually detectable output from the host computer system when operating in the noninterlaced mode of operation and operable to also display the converted television output in an overlay window while said visually detectable output from the host computer system is being displayed in the noninterlaced mode of operation;
> a communication channel between said host computer system and said display apparatus, the communication channel for transmitting commands from said host computer system to said display apparatus; and
> a microprocessor for receiving and processing commands from said host computer system, said microprocessor comprising control logic for controlling a television feature of the display apparatus from the host computer system when said screen is operating in said interlaced format, and for enabling an overlay window in response to receiving said user input,
> wherein the television feature includes at least one of changing a channel, volume adjustment, picture adjustment, selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution and color temperatures."

The cited references do not disclose a video capture circuitry configured for use in the noninterlaced mode to convert, **in response to receiving a command to change mode of operation, to convert an interlaced television compatible signal into a noninterlaced converted television output.** The Office admitted that Frederick does not perform conversions,

but does disclose PIP functionality. The Office introduced Roskowski and argued that Roskowski teaches having converters to convert between interlaced video data into noninterlaced video data, and vice versa. While it is generally true that Roskowski teaches such converter, there is no teaching for such conversion to take place "**in response to receiving a mode change command.**"

Frederick discloses an interface between a PC and a display (col. 4, lines 28-31), allowing interconnectivity between PC Theatre computers and display products that are made by different manufacturers. In Frederick's examples, a display 12 (col 19, lines 14-32) having the functions of a stand-alone TV and can support noninterlaced data is used. Frederick discloses two modes, a stand-alone TV mode, and a slave mode where the display is driven by the PC (col. 19, lines 25-32). Procedures to switch between the two modes are described in col. 21, line 15 – col. 22, line 22. In slave mode, the PC drives video input from the of the display (col. 21, lines 38-39). Frederick is silent as to converting an interlaced data to a noninterlaced data so it can be played in a slave mode. Frederick is also silent as to whether switching from stand-alone mode to slave mode causes any kind of video content processing/conversion.

As discussed above, Roskowski teaches a converter. Converting the TV signal in Browne, however, would have destroyed the Browne device.

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Browne is directed to an interface device where a stand-alone TV mode and a slave mode can be independent used without conversion of signal upon the change of mode, the combination as suggested by the Office would result in undesirable transition between stand-alone TV mode and slave mode.

As for Ersoz, Ersoz merely teaches displaying an interlaced video signal with a noninterlaced video signal. There is no mentioning of conversion taking place **in response to receiving a user input switching to the noninterlaced mode.**

In addition, the cited references do not disclose a **microprocessor to receive and process commands.** While some of the prior art may disclose a display apparatus having a general processor disposed within to merely receive instruction, none of the cited prior art discloses a display apparatus having a microprocessor disposed within to not only receive, but also process instruction.

Accordingly, favorable reconsideration and withdrawal of the rejection of independent claim 34 under 35 U.S.C. § 103 is respectfully requested.

Accordingly, the currently amended claim 34 is patentable over the cited references. Thus, dependent claims 35-37, 45, 50, 51, and 55 depending thereupon are also patentable.

Request For Allowance

Claims 1-30, 32-37, 39, 41, 43, and 45-55 are pending in this application. The applicant expresses his gratitude to the Examiner for the courtesies extended to Applicant's undersigned representative throughout prosecution of this application. In view of the foregoing, Applicant respectfully submits that the independent claims patentably define the present invention over the citations of record. Further, the dependent claims should also be allowable for the same reasons as their respective base claims and further due to the additional features that they recite. Separate and individual consideration of the dependent claims is respectfully requested. Favorable consideration is respectfully requested.

Respectfully submitted,
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